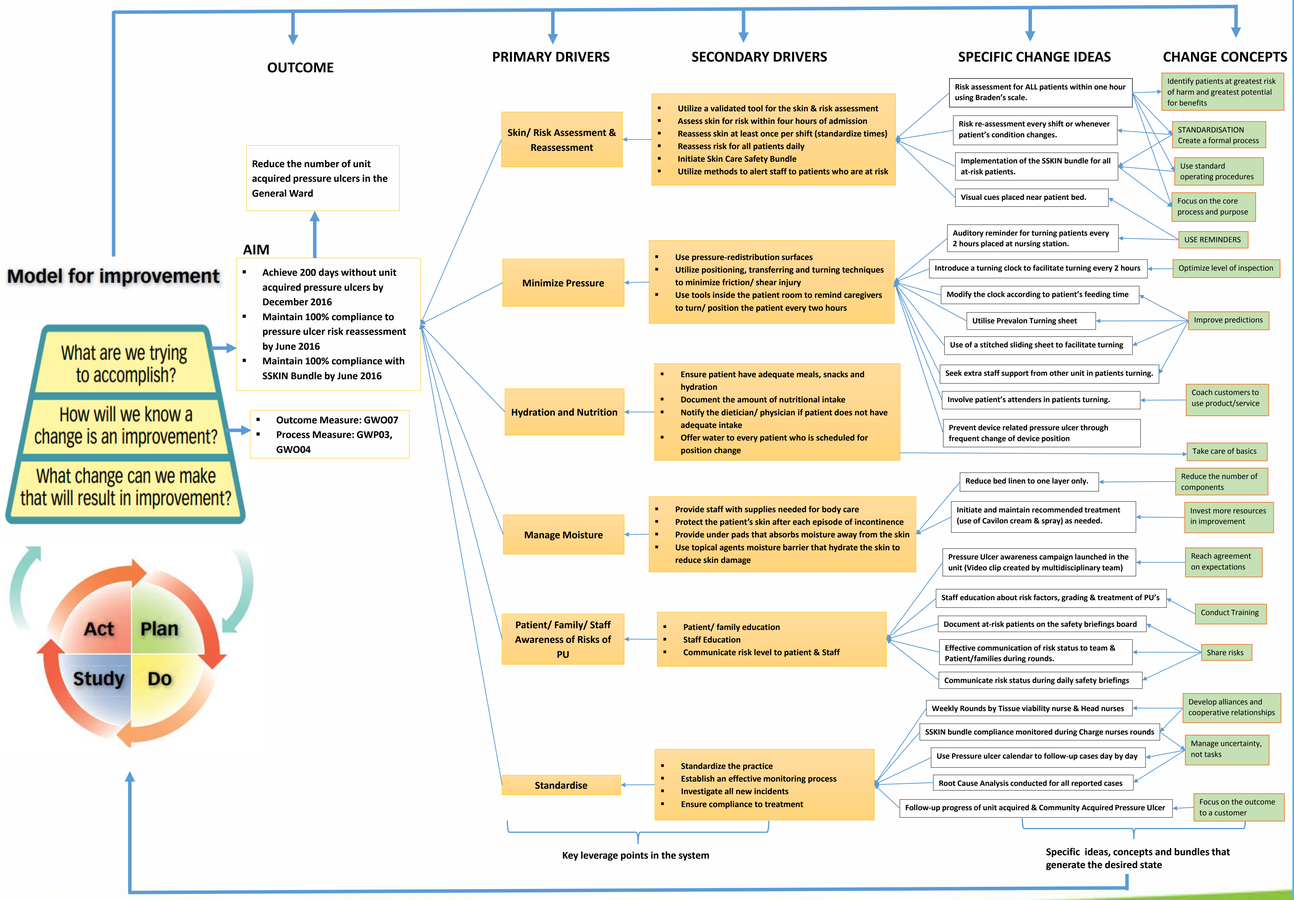
COST EFFECTIVENESS OF PRESSURE ULCER PRVENTION PROGRAM IN THE GENERAL WARD

Program Manager: Mary Jyothis Titus | Team Leader: Nadia Fakhouri | Safety Facilitator: Dr. Bushra Saeed | Head Nurse: Teresa Cabusas | Staff Nurse: Asif Zameer | Staff Nurse: Zobair Ahmed

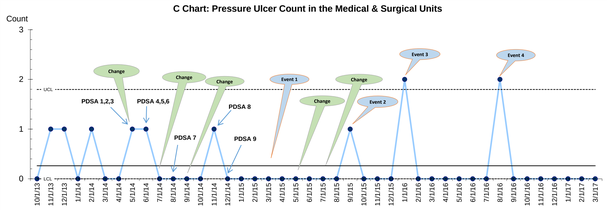
BACKGROUND:

- Hospital-acquired pressure ulcers are one of the most common preventable conditions which significantly increases the healthcare costs.
- Despite the introduction of clinical practice guidelines and advances in medical technology, the prevalence of pressure ulcers in hospitalized patients continues to escalate.
- Preventing pressure ulcers is an important part of patient care and safety and has a great impact on improving patient outcomes and in reducing the cost of treatment.
- In Dec 2013, the Medical Unit began a quality improvement initiative to reduce the annual incidence of HAPU's (Grade I/ II) from 33.33% (reflecting baseline) to less than 8.3% by implementing evidence based preventive strategies (i.e. SSKIN Bundle) in all the long term residents in the unit.

AIM, METHODOLOGY & INTERVENTIONS:



RESULTS:

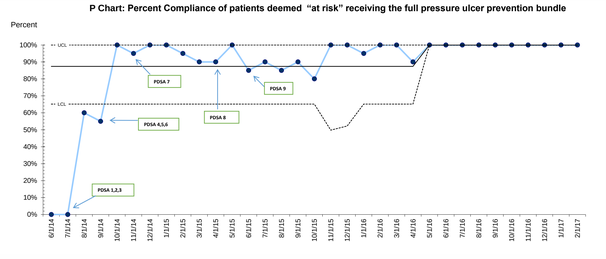


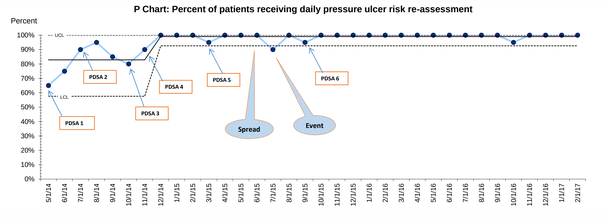
PDSA 1: Test if the new SSKIN bundle will help to prevent pressure ulcer in all the at-risk patients
PDSA 2: Test the bundle with one patient and one nurse during the morning shift
PDSA 3: Test the bundle with same nurse during the evening and night shift for 3 days
PDSA 4: Modify the bundle and retest again with the same nurse

PDSA 5: Test if hanging a clock near patient bed will help remind nurses to turn patient after every 2 hours
PDSA 6: Modify the clock according to patient feeding position and retest again
PDSA 7: Modify the bundle according to 2 hours and 4 hours actions
PDSA 8: Test if a new sliding sheet will help increase compliance with 2 hours turning
PDSA 9: Reduce the number of bed covers to one

Change: Assess staff knowledge on SSKIN bundle through conducting surveys
Change: Increase staff knowledge and skills regarding the SSKIN bundle through education sessions
Change: Launch of pressure ulcer awareness program
Change: Plan to follow the management and healing of existing pressure ulcers
Change: Prevention of device related pressure ulcers initiated

Event 1: Spread of Pressure Ulcer prevention plan to other unit (E2)
Event 2: Stage 1 PU developed on heel due to circulatory insufficiency
Event 3: Occurrence of 2 PU's in the unit, fishbone analysis done to find and address the root cause
Event 4: Occurrence of 2 PU's in the unit, fishbone analysis done to find and address the root cause





PDSA 1: Test if a red triangle used as a visual cue will help remind staff patients at risk
PDSA 2: Test if audit nurse can remind the responsible nurse to complete the risk reassessment
PDSA 3: Education including a video clip created by the healthcare team.
PDSA 4: Enhance the use of Braden Score through Pressure ulcer risk assessment program
PDSA 5: Test if daily Charge nurses pressure ulcer risk assessment round will evaluate the staff nurses assessment and identify any missing skin lesion.
PDSA 6: Test if a daily file audit will help to capture missed cases, instead of random sampling for data collection.

Event: No documentation in the CIS is counted as non-compliance .

COST EFFECTIVE ANALYSIS:

Objective: The aim of this study is to evaluate the cost-effectiveness of implementing evidence-based preventive strategies to reduce the incidence of HAPU's in long-term patients.

Design: Costs were derived based on the daily resources required to deliver standard protocols of care reflecting good clinical practice including the skin assessment and SSKIN care bundle.

Methodology:

- A bottom-up costing approach is used to estimate the treatment costs per patient, per episode of care, for ulcers of different grades and level of complications.
- Retrospective chart analysis of patient's developing Stage I and Stage II PU was conducted until the period of complete healing.
- Costs associated with both the treatment and resources required for daily skin care of a non-infected wound were calculated.
- Costs related to average LOS and nursing time was determined.

Setting: Inpatient Unit West 2

Subject: All long term/ total care patients "at-risk" of developing pressure ulcer during their hospital stay

Time period: Dec 2013 – Dec 2015

Calculation of Cost:

	Prevention Cost	Dressing Cost	Daily Treatment Cost	ALOS	Cost per episode of care	Episodes of care		
						2013	2014	2015
Stage 1	QR: 797	QR: 90	QR: 1087	5 days	QR: 6205	4	2	0
Stage 2	QR: 797	QR: 108	QR: 1105	10 days	QR: 11,820	4	2	1
Total episodes of care per year						8	4	1
Total cost per year						QR: 72,100	QR: 36,050	QR: 11,820

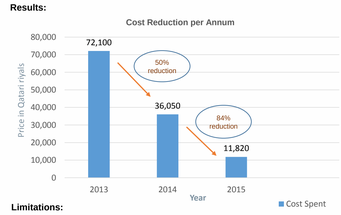
Prevention Cost: Daily cost related to implementing the evidence-based strategy i.e. SSKIN Bundle for preventing a pressure ulcer in all the at-risk patients includes the cost of support surfaces, skin care, repositioning, moisture/ incontinence, nutrition and inpatient bed day cost.

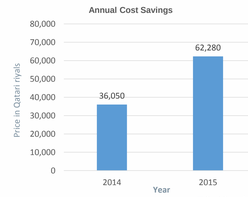
Dressing Cost: Cost related to the resources required for treating a pressure ulcer.

Treatment Cost: Daily treatment cost includes the sum of prevention cost and dressing cost per ulcer, including unforeseen costs.

Cost per Episode of Care: The daily treatment cost multiplied by average length of stay (based on the stage of pressure ulcer). This also includes the price of a single prevalon turning sheet used per episode of care.

Results:





Limitations:

- This is not limited to but may also include potential savings acquired from reducing the risk of hospital acquired infections and saving nursing time for patient care.
- Dressing costs of pressure ulcer may vary depending on the stage and nature of the wound.
- Special support surfaces are used only for high risk patients.
- Costs related to secondary complications were exclude.

CONCLUSIONS:

- It is far more cost effective to pay for the prevention of pressure ulcers compared with the standard care.
- By reducing the incidence of HAPU's for patients who are admitted to hospital for other conditions, we can also generate potential savings through:

➢Reducing the additional costs of treating patients with pressure ulcers.
➢Releasing beds and nursing time to treat more patients within the same overall capacity
➢Lowering the risk of hospital acquired infections by decreasing the overall length of stay.

SUMMATIVE STATEMENT:

The costs associated with pressure ulcers are considerable. HAPUs tend to be costly because of extended length of stay and complications due to age (i.e. the elderly) and comorbid conditions (e.g. obesity, diabetes, unconsciousness, etc.). The clinical and economic evidence supports that it is more cost effective to pay for the prevention of HAPUs compared with standard care, thus placing stress on hospitals to prevent incidence of this costly condition. The use of aggressive preventive measures in the long-term care setting is effective in reducing pressure ulcers and requires a relatively low level of institutional expenditures. Effective methods for the prevention of HAPU's typically include modern support surfaces, frequent patient repositioning, a focus on patient nutrition, managing moisture and incontinence in conjunction with performing daily risk assessment using Braden scale.

In Collaboration with